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SICKNESS AMONG MALE INDUSTRIAL EMPLOYEES DURING THE FIRST QUARTER OF 1937[1]

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The unfavorable rate of disability among a sample of industrial employees reported for the final quarter of 1936 persisted through the first quarter of 1937. Sickness, including nonindustrial accidents, which caused absence from work for 8 calendar days or longer occurred at a higher frequency, 148.1 cases per 1,000 employees, in the first quarter of this year than was recorded for the same period of any year since 1929; and, as in 1929, the excessive rate was primarily due to an outbreak of influenza. The average annual rate for this disease among all the members of the different cooperating establishments during the first quarter of 1937 was 61.7 cases per 1,000; however, the average frequency of influenza for the members of many of the reporting companies was more than double this number. The employees of one establishment during this quarter year experienced a rate of 180 cases of influenza per 1,000 employees.

The average annual rate for pneumonia in the first quarter of 1937, 4.5 cases per 1,000 employees, was not as high as in the same quarter of 1936, 4.9 cases per 1,000, but exceeded the average rate for the 5-year period 1932–36 by 28 percent. As may be expected during an influenza epidemic, other respiratory diseases such as bronchitis, diseases of the pharynx and tonsils, and "other respiratory diseases", including diseases of the upper respiratory system, also occurred at rates in excess of those for the corresponding quarters of the previous years when there were no observable epidemics.

The Metropolitan Life Insurance Co.[2] reports, "Influenza and pneumonia caused more deaths during the winter months of 1937 than they have at this season for several years past. This year's [1937] mortality rate, to date, from influenza is higher than it has been since 1933, and the death rate from pneumonia is the highest since 1931."

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[1] A report covering the final quarter of 1936 and the year 1936 as a whole was published in the Public Health Reports for Apr. 30, 1937, vol. 52, no. 18, pp. 537–539.

[2] Statistical Bulletin, Metropolitan Life Insurance Co., vol. 18, no. 4, Apr. 1937, p. 3.

TABLE 1.—*Frequency of disability lasting 8 calendar days or longer in the first quarter of 1937, compared with the first quarter of preceding years. (Male morbidity experience of industrial companies which reported their cases to the United States Public Health Service)*[1]

Diseases and disease groups which caused disability. (Numbers in parentheses are disease title numbers from the International List of the Causes of Death, fourth revision, Paris, 1929)	Annual number of disabilities per 1,000 men in the first quarter of—		
	1937	1936	5 years, 1932–36
Sickness and nonindustrial injuries [2]	148.1	113.1	110.8
Nonindustrial injuries	10.2	11.3	11.1
Sickness [2]	137.9	101.8	99.7
Respiratory diseases	88.5	53.8	51.6
Bronchitis, acute and chronic (106)	7.5	7.2	5.4
Diseases of the pharynx and tonsils (115a)	6.0	5.4	5.3
Influenza and grippe (11)	61.7	29.1	30.7
Pneumonia, all forms (107–109)	4.5	4.9	3.5
Tuberculosis of the respiratory system (23)	.7	.8	1.0
Other respiratory diseases (104, 105, 110–114)	8.1	6.4	5.7
Nonrespiratory diseases	49.4	48.0	48.1
Diseases of the stomach, cancer excepted (117–118)	3.9	3.5	3.7
Diarrhea and enteritis (120)	.9	1.2	1.0
Appendicitis (121)	4.5	4.0	3.6
Hernia (122a)	1.5	1.8	1.7
Other digestive diseases (115b, 116, 122b–129)	2.8	2.9	3.1
Rheumatic group, total	9.7	10.1	11.5
Rheumatism, acute and chronic (56, 57)	4.4	4.4	5.6
Diseases of the organs of locomotion (156b)	2.7	3.4	3.4
Neuralgia, neuritis, sciatica (87a)	2.6	2.3	2.5
Neurasthenia and the like (part of 87b)	.8	.9	.9
Other diseases of the nervous system (78–85, part of 87b)	.8	1.3	1.4
Diseases of the heart and arteries, and nephritis (90–99, 102, 130–132)	4.8	4.6	4.3
Other genito-urinary diseases (133–138)	2.1	2.5	2.4
Diseases of the skin (151–153)	3.2	2.4	2.4
Infectious and parasitic diseases except influenza (1–10, 12–22, 24–33, 36–44)	3.9	3.5	3.2
Ill-defined and unknown causes (200)	3.6	2.3	2.1
All other diseases (45–55, 58–77, 88, 89, 100, 101, 103, 154–156a, 157, 162)	6.9	7.0	6.8
Average number of males covered in the record	173,617	145,701	142,436
Number of companies included	26	26	----------

[1] In 1936 and 1937 the same companies are included. The rates for the first quarters of the years 1932 to 1936 include 21 of these companies, which employed an average of 113,264 men during these months, or 80 percent of the 142,436 men representing the sample population for the 5-year average.

[2] Exclusive of disability from the venereal diseases and a few numerically unimportant causes of disability.

The one and only favorable rate among the specific respiratory diseases in this quarter as compared with the corresponding quarter of 1936 or of the 5 preceding years is the rate for tuberculosis of the respiratory system, the average annual rate for which was 0.7 case per 1,000 members. Never has this particular rate been found to be lower among this group of industrial employees.

Of the digestive diseases, only appendicitis caused disability more often during the first 3 months of 1937 than in the same months of 1936 or of the 5-year period 1932–36. In fact, 4.5 cases of appendicitis per 1,000 employees is the all-high for this disease since the first quarter of 1929.

The rate of 9.7 cases per 1,000 industrial workers for the rheumatic group of diseases was favorable as compared with the same months of preceding years.

For diseases of the skin, the rate 3.2 cases per 1,000 members, as compared with 2.4 cases for 1936 and also the 5-year period 1932–36, shows an increase of 33 percent in frequency.

This report for the first quarter of 1937 is a continuation of like reports on morbidity statistics published by the United States Public Health Service. It relates to the average frequency of new cases of sickness and nonindustrial injuries causing absence from work for 8 calendar days or longer among approximately 174,000 male industrial employees during the first 3 months of 1937 as compared with the like period of 1936 and the 5-year period 1932–36. The data were computed from periodic reports received from 26 sick-benefit associations or relief departments of establishments located east of the Mississippi and north of the Ohio and Potomac Rivers.

THE ELIMINATION OF SELENIUM AND ITS DISTRIBUTION IN THE TISSUES [1]

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A partial survey of the rural population in three of the Great Plains States in 1936 disclosed that a surprisingly large percentage of people living on seleniferous soil were excreting selenium in the urine, in many instances in appreciable amounts (*1*). No data were available at the time as to the precise sources of selenium or the actual amounts ingested. Though signs of ill health were often elicited in individuals excreting selenium in the urine it was not possible to be certain as to cause and effect in view of the vagueness of the symptomatology and the failure to recognize signs or symptons that might be considered pathognomonic of selenium poisoning. Two series of experiments were therefore undertaken: One with a view to ascertaining the toxic effects and pathologic manifestations of graded doses of selenium administered to experimental animals over an extended period of time; the other with the object of ascertaining the manner and rate of elimination of selenium when so administered, in the hope that such information might be useful in arriving at some conclusion regarding the probable quantitative intake of selenium in man exposed to its hazards. The results of the first mentioned problem have been reported elsewhere (*2*). The present investigation deals with the phases of excretion of selenium and its distribution in the tissues of animals in chronic selenium poisoning.

Quarelli (*3*) in 1913 found selenium in the blood, liver, and spleen of animals treated with the colloidal metal. Filippi (*4*), working with

[1] Presented before the Pharmacological Society at its annual meeting in Memphis, Apr. 21-24, 1937.

the soluble salts of selenious and selenic acids, as well as with colloidal selenium, also found selenium in appreciable amounts in the liver and at times also in smaller amounts in the lungs, intestines, blood, and other tissues. More recently Dudley (*5*), using more satisfactory analytical methods, demonstrated selenium in the excreta and in many tissues of the body of livestock in acute or subacute poisoning with sodium selenite or with heavily contaminated seleniferous plants. Munsell, De Vaney, and Kennedy (*6*), studying chronic selenium poisoning in rats, found that a small proportion of the selenium ingested was stored in the tissues and that a very considerable percentage of it was excreted in the urine and feces.

SCOPE AND MATERIAL

In the present investigation we were concerned chiefly with the paths of elimination, the rate of excretion, and the tissue distribution of selenium in relation to the daily intake when administered to cats as sodium selenite, either orally or subcutaneously. The cats were kept in metabolism cages and maintained on a diet of raw lean beef and milk. They had free access to water at all times. The urines were collected at 3- or 4-day intervals with toluol as a preservative. The total quantities excreted were noted, and aliquot samples, usually of 100 cc treated with 5 cc concentrated nitric acid, were saved for selenium analysis. Samples of feces were also collected over a sufficiently long period of time and analyzed in order to obtain a fair estimate of the total amount of selenium so excreted. In this manner data were obtained showing, first, the concentration of selenium in the urine and feces on a given daily dose, and, second, the total amount excreted in the urine and feces in relation to the total intake of selenium over a given period of time. At death, or at the end of a suitable observation period when the animals were sacrificed, samples of tissues were taken for selenium analyses. In several instances the animals were exsanguinated from the carotid artery under ether anesthesia, the blood was oxalated, and separate analyses were made on the washed erythrocytes and the plasma plus the washings.

The analytical methods employed were essentially the same as those previously used and described in connection with the analytical work on human urines (*1*).

RESULTS

The data obtained in this series of experiments are summarized in three tables. Table 1 shows the urinary and fecal excretion of selenium in 25 cats receiving daily doses of from 0.02 to 0.25 mg per kilo of the element over an observation period of from 15 to 188 days. Analysis of the data shows that from 28 to 90 percent, and usually from about 50 to 80 percent, of the total intake of selenium is excreted

in the urine. In general, it would seem that the percentile urinary excretion is higher with the smaller doses of 0.02 and 0.1 mg per kilo than with the larger and definitely toxic dose of 0.25 mg per kilo. Also the percentile urinary excretion of selenium appears somewhat higher in animals receiving it subcutaneously than in those receiving it orally. The estimated fecal excretion of selenium has not exceeded 18 percent of the total intake, and is decidedly less in animals receiving it subcutaneously than in those receiving it orally. It thus seems probable that some of the fecal selenium in animals receiving sodium selenite orally may represent unabsorbed selenium.

TABLE 1.—*Excretion of selenium in cats receiving selenium daily as sodium selenite*

Cat. No.	Weight, kilos	Daily dose Se, mg per kilo	Route	Days	Total intake, mg	Total excretion		Excretion, percent of intake		Average concentration of selenium, micrograms percent		Remarks
						Urine mg	Feces mg	Urine	Feces	Urine	Feces	
1	3.3	0.25	Oral	144	104.5	43.7	-------	42	------	403	-------	Survived.
9	3.0	.25	------do	55	35.3	19.8	-------	55	------	357	-------	Died.
10	5.7	.25	------do	144	166.0	45.5	30.0	28	18	427	2,640	Survived.
11	1.5	.25	------do	135	49.0	26.6	8.0	56	16	299	1,870	Sick, killed.
12	1.1	.25	------do	100	27.5	14.7	-------	53	------	240	-------	Died.
2	3.0	.25	Subcutaneous	27	12.0	4.5	-------	36	------	435	-------	Do.
21	3.5	.25	------do	69	51.6	30.9	.2	60	0.4	430	91	Survived.
22	2.9	.25	------do	62	36.7	19.2	1.6	53	4	349	636	Sick, killed.
23	2.0	.25	------do	15	7.0	1.9	.1	28	1.4	440	195	Do.
13	2.0	.10	Oral	175	38.0	22.0	5.0	58	13	162	456	Survived.
14	2.7	.10	------do	168	48.5	28.1	7.5	58	16	198	936	Do.
15	3.1	.10	------do	174	59.0	31.9	2.8	53	5	193	228	Do.
16	2.0	.10	------do	40	8.6	7.9	0.9	90	10	160	448	Died.
17	2.6	.10	Subcutaneous	168	52.0	36.6	3.7	70	7	200	400	Survived.
18	3.0	.10	------do	185	61.2	52.6	2.5	86	4	241	195	Do.
19	2.0	.10	------do	185	38.3	31.9	1.5	83	4	214	135	Do.
20	1.9	.10	------do	188	45.8	25.8	1.6	56	3	172	148	Do.
28	3.8	.02	Oral	122	8.5	5.7	1.0	67	12	57	118	Do.
29	3.3	.02	------do	76	3.3	1.9	-------	58	------	34	-------	Do.
30	3.4	.02	------do	87	5.4	3.4	-------	63	------	49	-------	Do.
31	2.7	.02	------do	87	4.2	2.5	-------	60	------	45	-------	Do.
24	2.8	.02	Subcutaneous	136	7.8	7.2	.2	90	3	62	31	Do.
25	2.7	.02	------do	128	7.2	5.3	.3	74	4	42	53	Do.
26	2.3	.02	------do	127	5.2	4.3	Trace	83	0	41	Trace	Sick, killed.
27	3.2	.02	------do	122	7.4	4.5	.2	61	3	39	35	Survived.

As for the remainder of the selenium unaccounted for in the urine and feces, some of it is stored in the body and some must be eliminated by other pathways. In this connection it may be recalled that, in 1894, Hofmeister (*7*) suggested that selenium might in part be excreted through the lungs as volatile compounds. This suggestion received confirmation in 1913 by Filippi (*4*).

Of particular interest are the figures showing the average concentration of selenium in the urine, expressed in micrograms per 100 cc, in relation to the daily intake. Though there is considerable variation in the urinary concentration of selenium at different times in an animal on a given daily dose, there is, nevertheless, a rather definite relationship between the dose administered and its average concentration in

the urine over an extended period. Thus, a daily dose of 0.25 mg per kilo has resulted in an average excretion usually of from 300 to 400 micrograms percent; a daily dose of 0.1 mg per kilo resulted in an excretion of about 200 micrograms percent or somewhat less; while a daily dose of 0.02 mg per kilo gave an average excretion level of from 34 to 62 micrograms percent. The concentration of selenium in the feces is much more variable, may be quite high when relatively large doses are given orally, and bears no such definite relationship to the daily intake in chronic poisoning as appears to prevail in the instance of the urine.[2]

The distribution and storage of selenium in the tissues of cats in chronic poisoning with sodium selenite are shown in table 2. It is quite obvious that tissue selenium depends on the daily dose and the route of administration. In general the liver, kidney, spleen, and pancreas contain the highest concentrations of selenium. The heart and lungs come next in order, and may contain considerable amounts, especially when given subcutaneously in the somewhat larger dose of 0.25 mg per kilo.[3] The blood in chronic poisoning contains relatively small amounts of selenium, the erythrocytes containing more than the plasma. Small amounts or traces of selenium may be found apparently in every tissue of the body in chronic poisoning.

TABLE 2.—*The distribution of selenium in the tissues of cats in chronic poisoning with sodium selenite*

Tissue	Average selenium (micrograms per 100 gm)			
	Daily dose 0.25 mg selenium per kilo		Daily dose 0.1 mg selenium per kilo	
	Subcutaneous	Oral	Subcutaneous	Oral
Liver	372 (4)	213 (5)	138 (3)	77 (1)
Kidney	422 (4)	145 (5)	235 (3)	150 (1)
Spleen	291 (2)	115 (2)	37 (3)	----
Pancreas	565 (2)	142 (2)	77 (3)	----
Heart	241 (2)	85 (5)	30 (3)	----
Lungs	122 (4)	44 (5)	45 (3)	Trace (1)
Erythrocytes	76 (1)	42 (2)	23 (3)	----
Plasma	36 (1)	9 (2)	17 (3)	----
Intestine	28 (4)	22 (2)	----	Trace (1)
Muscle	23 (4)	16 (5)	8 (1)	9 (1)
Bone	22 (3)	19 (3)	----	Trace (1)
Fat	13 (1)	Trace (3)	----	----
Skin	----	10 (2)	Trace (3)	----
Brain	46 (2)	Trace (2)	----	----

NOTE.—Figures in parentheses indicate number of experiments.

Some observations on the selenium content in pooled samples of bile of rabbits and cats in acute and subacute poisoning with sodium selenite or selenate given in doses of 0.5 to 3 mg per kilo showed that

[2] Detailed data concerning the effects of the doses of selenium shown in this table may be found in the paper on the toxicity and pathology of selenium (*f.*)

[3] This, it may be pointed out here, is about 10 percent of the minimum lethal dose.

when these compounds were administered orally the selenium content was low, 36 and 48 micrograms percent respectively in two series of experiments. When the selenium was administered subcutaneously or intravenously in similar doses in another group of animals the selenium content of the bile was comparatively high, 336 micrograms percent.

It was of interest to ascertain how long selenium is retained in the body after its administration is discontinued in cases of chronic poisoning with small daily doses. In this experiment 4 cats that had received 0.1 mg selenium per kilo per day over a period of from 168 to 175 days were used. Three of these animals had received the selenium as sodium selenite orally and one subcutaneously. At the time when the administration of selenium was discontinued they were excreting from 190 to 252 micrograms of selenium per 100 cc, as shown in table 3. Within 2 weeks there was a sharp reduction in the urinary selenium, showing that the bulk of it is eliminated within that time. Small amounts of selenium, however, persisted in the urine; a month later they were still eliminating some 3 to 19 micrograms percent. The animals were killed at that time, and analysis of the livers showed a concentration of from 17 to 29 micrograms per 100 grams. The combined kidneys and spleens of the four animals showed but 9 micrograms percent. It would seem, therefore, that the bulk of selenium administered as sodium selenite leaves the body rather rapidly, though small amounts may be retained for a month and possibly longer.

TABLE 3.—*The persistence of selenium in the tissues and urine 1 month after discontinuing its administration*

Cat No.	Urinary selenium at end of administration (micrograms percent)	Selenium, micrograms percent 1 month later		
		Urine	Liver	Spleen and kidney
13	252	19	17	9.
14	225	5	22	Composite sample of cats 13, 14, 15, and 17.
15	190	4	27	
17	192	3	29	

DISCUSSION

Intimately connected with the general problem of selenium as a possible health hazard to man in selenium endemic regions are the following: (1) The precise sources of selenium to which man is exposed; (2) the chemical nature of the selenium; (3) the probable amounts of selenium absorbed by man in the areas where it is known to occur in the soil and vegetation; and (4) the limits of tolerance—in other words, how much of it may be absorbed with impunity.

Data are now being accumulated in this laboratory which we believe will give information on the first question. There is no definite information at present on the second question other than that the selenium to which man is exposed is probably for the most part, though not exclusively, organic in nature. If the fate of naturally occurring organic selenium is similar to that of soluble inorganic selenium, we believe the data in this paper furnish at least a partial answer to the third question. It was previously reported from this laboratory that in about 50 percent of the subjects studied, representing 90 families living on seleniferous soil, selenium was found in the urine in amounts varying from 20 to 133 micrograms percent (*1*). In a second field survey in the fall of 1936, the results of which will be published later, nearly 200 micrograms percent has been found in the urine of some subjects. This, in the light of our present experiments, would seem to indicate a daily absorption of 1 to 2, and in some cases possibly as high as 5, milligrams of selenium for the average adult. From the results which we have reported recently on the toxicity and pathology of inorganic selenium (*2*), it does not seem probable that such quantities of selenium could be absorbed more or less continually with impunity. Work now in progress on the toxicity of naturally occurring organic selenium and its fate in the body may throw further light on this subject.

SUMMARY

The urinary and fecal excretion of selenium in cats receiving graded doses of selenium as sodium selenite over periods of from 15 to 188 days has been studied. From 50 to 80 percent of the total intake is usually excreted in the urine and from traces to 18 percent is excreted in the feces. More is excreted in the feces when the selenium is given orally than when given subcutaneously.

A fairly definite relationship has been found between the selenium concentration in the urine and the daily dose administered in chronic selenium poisoning. This seems to furnish a basis for estimating the amount of selenium absorbed by man in chronic poisoning from a knowledge of the concentration of selenium excreted in the urine.

In chronic poisoning with inorganic selenium the element is widely distributed throughout the body tissues, being found in highest concentrations in the liver, kidney, spleen, pancreas, heart, and lungs. In the blood there is more selenium in the erythrocytes than in the plasma.

The bulk of stored selenium in chronic poisoning with small doses of inorganic selenium is eliminated within 2 weeks after its administration is discontinued. Small amounts persist in the urine and in some of the tissues, especially the liver, for a month, and possibly longer.

The bearing of these findings upon the problem of the selenium health hazard in man is discussed.

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NOTES ON THE CONTINUOUS REARING OF AËDES AEGYPTI IN THE LABORATORY

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From an experimental standpoint and for the study of certain epidemics, it is sometimes desirable to raise continuously in the laboratory large numbers of *Aëdes aegypti* with a minimum of time and attention. As some difficulties have been encountered in maintaining broods of this mosquito, a study was undertaken to establish a convenient routine for the rapid development of a colony of this species and for its maintenance thereafter.

The *Aëdes* family as a whole lays eggs just above the water surface rather than on it, and *Aëdes aegypti* shows this characteristic strongly. It was observed by dissection that in freshly laid eggs the embryo was not developed, and that as the eggs aged, development of the embryo progressed to the point of hatching provided the eggs were kept moist. If the eggs dried out, the young embryos died before maturity.

Practically all of the observations here reported were made at room temperatures of 70° to 75° F., and under these conditions it was noted that approximately 100 hours elapsed from the time the egg was laid until the embryo was fully developed and ready to hatch.

It was found that pieces of coarse wet sponges, the equivalent of a 2-inch cube in size, were very attractive to the insects as a place on which to deposit eggs. These sponges were removed daily and kept moist, but not soaking wet, for varying periods before being allowed to dry. It was observed that with sponges kept moist 20 hours and then dried and submerged, only a small percentage of the contained eggs would hatch and that the hatching was very slow; only about 45 percent of the eggs hatched after 79 hours of submergence. Resubmerging of the same sponges after drying produced further hatches even up to eight different submergences.

Other groups of sponges containing eggs were held moist for periods of 48, 72, and 96 hours, and as this "ripening" period increased, the hatch took place more quickly and more completely as the dry sponges were submerged. If held moist for more than 96 hours, some hatching of larvae occurred on the moist sponges.

Taking 96 hours as the most satisfactory time to allow the egg sponges to remain moist, or to "ripen", the next question seemed to be how long such "ripened" eggs could be held dry on the sponges and still hatch when submerged. Dry egg-laden sponges were held for as long as 2 months and gave a prompt hatch of 75 percent or better when submerged. The percentage of larvae hatched decreased to 50 percent or below if the sponges were held dry 10 to 12 weeks.

In maintaining a brood of mosquitoes, they must, of course, be given a blood meal regularly in order to produce fertile eggs. During the study the following observations were made on the adults:

Adult *Aëdes aegypti* live and reproduce very nicely in small improvised cages. They can be expected to take the first blood meal 20 to 40 hours after emerging from the pupal stage, but they will usually not feed on blood thereafter except at 2-day intervals. In captivity the 2-day period seems necessary for the digestion of a blood meal.

Adults commence to lay eggs 4 to 6 days after the first blood meal; the laying period from a single feeding covers 3 to 4 days. From records of four groups an average egg yield per insect per bite (for the first blood meal) was 6 to 20 eggs.

In each group of insects it was intended to keep approximately equal numbers of males and females; but if no additions were made, it was invariably noted that at the end of 30 days there had been a high mortality among the males and almost none among the females. It appears, therefore, that in captivity males are shorter lived than females. More males than females always came through from eggs, and possibly this is nature's method of keeping the sexes approximately equal in number.

Groups of adult females properly fed and confined with males produced hatchable eggs in quantity to an age of 6 weeks. At the end of that period new broods were substituted.

SUMMARY OF OBSERVATIONS

The experiments here reported covered a period of two winter seasons and demonstrate quite clearly the advantages of the following procedure for the continuous rearing of groups of *Aëdes aegypti* in the laboratory:

Adults.—These should be captured in nature and, if used to start a brood, should be confined in cages and allowed to lay eggs without a further blood meal. A cage 20 by 20 by 16 inches, with cellophane sides, will care for 150 to 200 insects. The insect cage should have a

sleeve for manipulation. Sugar water on a small ball of cotton should be kept continuously in the cage as food (especially for males). A dripping wet piece of sponge about the size of a 2-inch cube should be put in the cage each day and removed each morning if any eggs appear on it. Caged specimens reared from eggs in the laboratory should be offered blood each day by inserting the arm into the cage, or by introducing laboratory animals.

Eggs.—The withdrawn sponges with eggs should be kept moist but not dripping wet for a period of 96 hours and then allowed to dry naturally. Such ripened eggs will remain viable for at least 2 months. Sponges may be kept moist by placing them directly on wet cotton or wet blotting paper, or they may be placed on wet cotton all enclosed in a covered container.

Rearing larvae.—The dry sponges are immersed in shallow white enameled trays (in ordinary tap water) for 18 to 24 hours and then discarded. The young larvae should now be fed regularly every 2 days with yeast or pablum and the water changed if it becomes very offensive in odor. Pupae should appear in 7 to 8 days and should be removed to test tubes and placed in the adult cages to hatch. Pablum (a powdered breakfast food) was found more convenient than yeast for feeding larvae.

It is believed that the methods outlined here constitute a simple and efficient means of maintaining groups of *Aëdes aegypti* in the laboratory. The ripening process to which the eggs are submitted permits not only more efficient reproduction of the species, but by enabling the holding of eggs and consequent grouping of emerging insects, it reduces time and effort to a minimum.

FLEAS, TICKS, AND LICE RETAIN PLAGUE INFECTION AFTER 10 MONTHS IN ICEBOX

According to a report dated August 9, 1937, from Dr. W. M. Dickie, Director of Public Health of California, specimens of fleas, ticks, and lice, taken from ground squirrels (*beecheyi*) in San Mateo County during September 1936, and stored in the icebox until July of this year, produced typical plague infection when inoculated into guinea pigs. The following lots, all collected on September 25, 1936, were proved positive by guinea-pig inoculation:

15 fleas and 3 ticks from 1 *beecheyi* squirrel.
1 tick, 61 fleas, and 11 lice from 2 *beecheyi* squirrels.
36 lice and 24 fleas from 1 *beecheyi* squirrel.
29 fleas and 4 lice from 2 *beecheyi* squirrels.
31 fleas and 11 lice from 1 *beecheyi* squirrel.

All of the examinations were made by Dr. K. F. Meyer, Director of the Hooper Foundation for Medical Research.

DEATHS DURING WEEK ENDED AUG. 7, 1937

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Aug. 7, 1937	Corresponding week, 1936
Data from 86 large cities of the United States:		
Total deaths	7,334	6,972
Average for 3 prior years	7,127	
Total deaths, first 31 weeks of year	280,048	280,943
Deaths under 1 year of age	541	451
Average for 3 prior years	537	
Deaths under 1 year of age, first 31 weeks of year	17,770	17,598
Data from industrial insurance companies:		
Policies in force	69,616,242	68,159,773
Number of death claims	11,894	12,210
Death claims per 1,000 policies in force, annual rate	8.9	9.4
Death claims per 1,000 policies, first 31 weeks of year, annual rate	10.4	10.4

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Aug. 14, 1937, and Aug. 15, 1936

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936
New England States:								
Maine	----	1	----	1	----	7	0	0
New Hampshire	----	----	----	----	----	3	0	0
Vermont	----	----	----	----	----	1	0	0
Massachusetts	7	6	----	----	23	52	5	4
Rhode Island [1]	----	----	----	----	----	----	0	0
Connecticut	7	1	----	----	15	10	0	0
Middle Atlantic States:								
New York	14	18	[3] 7	[3] 1	130	120	3	8
New Jersey	7	8	----	10	91	52	3	2
Pennsylvania [1]	9	17	----	----	213	53	6	3
East North Central States:								
Ohio	12	17	6	9	125	32	5	8
Indiana [1]	12	15	3	5	23	----	2	0
Illinois [1]	14	21	4	3	72	7	2	1
Michigan	16	7	----	----	60	13	0	2
Wisconsin	2	1	21	11	18	16	0	0
West North Central States:								
Minnesota	3	2	1	----	3	5	0	0
Iowa [1]	1	3	----	----	5	----	0	0
Missouri	15	8	32	22	15	1	0	1
North Dakota	2	----	3	----	2	----	1	0
South Dakota	----	1	----	----	2	3	1	0
Nebraska	----	2	----	----	1	5	0	1
Kansas	----	7	----	----	6	1	1	2
South Atlantic States:								
Delaware	----	----	----	----	2	1	0	0
Maryland [1 2]	3	6	----	2	4	18	5	3
District of Columbia	3	4	----	----	5	4	0	3
Virginia [1]	10	10	----	----	31	43	4	1
West Virginia [1]	3	11	12	2	13	32	0	0
North Carolina [1 4]	22	16	----	2	32	1	3	0
South Carolina [4]	8	2	54	52	----	5	0	0
Georgia [4]	10	13	----	----	----	----	0	2
Florida [4]	5	1	1	----	7	2	0	0
East South Central States:								
Kentucky	10	6	----	----	17	8	1	2
Tennessee [1 4]	4	16	10	11	25	4	1	2
Alabama [4]	11	9	3	5	4	2	4	0
Mississippi [3]	15	6	----	----	----	----	0	1

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Aug. 14, 1937, and Aug. 15, 1936—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936
West South Central States:								
Arkansas	13	5	7	6	4	----	1	0
Louisiana [4]	16	14	11	20	1	5	0	2
Oklahoma [4]	6	4	----	----	4	1	4	0
Texas [4]	20	28	39	40	68	12	6	1
Mountain States:								
Montana	1	1	----	2	3	----	0	2
Idaho	----	----	1	----	2	3	0	0
Wyoming [1] [6]	----	----	----	----	4	1	0	0
Colorado	3	1	----	----	14	3	1	1
New Mexico	----	1	----	----	11	8	0	0
Arizona	----	----	12	16	----	6	1	1
Utah [4]	----	----	----	----	21	9	0	0
Pacific States:								
Washington	1	1	----	----	10	6	0	0
Oregon [1]	6	----	----	6	7	3	0	0
California	18	26	5	11	18	55	3	3
Total	309	316	232	237	1,111	613	63	56
First 32 weeks of year	13,402	14,412	274,261	139,921	240,265	266,841	4,120	5,828

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936
New England States:								
Maine	8	6	5	2	0	0	4	4
New Hampshire	1	0	1	2	0	0	0	0
Vermont	2	0	----	1	0	0	0	0
Massachusetts	25	1	20	41	0	0	4	2
Rhode Island [1]	2	0	3	----	0	0	2	1
Connecticut	3	1	6	8	0	0	2	2
Middle Atlantic States:								
New York	22	7	76	101	11	0	25	28
New Jersey	6	0	14	30	0	0	10	11
Pennsylvania [1]	14	5	74	75	0	0	33	18
East North Central States:								
Ohio	45	11	106	98	0	4	41	16
Indiana [1]	8	1	23	14	6	0	9	8
Illinois [1]	32	9	90	99	5	2	40	21
Michigan	24	4	104	73	1	1	12	14
Wisconsin	10	0	30	56	1	1	3	2
West North Central States:								
Minnesota	5	0	19	22	7	2	0	1
Iowa [1]	8	2	9	19	4	1	6	1
Missouri	16	0	36	23	10	2	34	22
North Dakota	0	0	4	2	6	1	2	0
South Dakota	0	1	5	11	0	0	0	4
Nebraska	14	0	1	8	0	0	0	2
Kansas	13	2	21	71	0	0	10	13
South Atlantic States:								
Delaware	0	0	1	1	0	0	0	0
Maryland [1] [5]	13	0	7	9	0	0	15	3
District of Columbia	1	0	4	2	0	0	6	1
Virginia [1]	4	6	5	6	0	0	37	25
West Virginia [1]	1	2	14	6	1	0	29	12
North Carolina [1] [4]	6	7	28	19	0	0	22	30
South Carolina [4]	2	0	6	----	0	0	15	10
Georgia [4]	0	2	4	11	0	0	33	37
Florida [4]	2	3	4	5	0	0	1	1
East South Central States:								
Kentucky	2	6	27	10	0	0	50	41
Tennessee [1] [4]	1	20	8	12	0	0	30	54

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Aug. 14, 1937, and Aug. 15, 1936—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936	Week ended Aug. 14, 1937	Week ended Aug. 15, 1936
East South Central States—Contd.								
Alabama [4]	4	22	2	5	0	0	26	28
Mississippi [3]	11	11	1	1	0	0	13	13
West South Central States:								
Arkansas	19	0	6	3	0	0	23	14
Louisiana [4]	8	0	7	3	0	0	17	27
Oklahoma [5]	23	0	6	3	0	0	44	18
Texas [4]	45	2	34	17	0	1	87	30
Mountain States:								
Montana	1	0	6	7	7	23	5	8
Idaho	0	2	3	3	1	1	2	2
Wyoming [1 6]	6	0	------	4	0	0	0	3
Colorado	8	2	2	6	0	0	1	1
New Mexico	2	0	3	4	0	0	13	10
Arizona	0	0	1	------	0	0	0	0
Utah [3]	1	0	7	4	1	0	1	0
Pacific States:								
Washington	0	3	5	11	1	0	3	2
Oregon [1]	1	1	5	2	0	0	5	2
California	36	8	22	69	5	2	15	21
Total	455	147	865	979	67	41	730	563
First 32 weeks of year	2,940	1,321	164,040	177,911	7,914	5,904	7,543	6,709

[1] Rocky Mountain spotted fever, week ended Aug. 14, 1937, 26 cases, as follows: Rhode Island, 2; Pennsylvania, 1; Indiana, 1; Illinois, 2; Iowa, 1; Maryland, 2; Virginia, 7; West Virginia, 1; North Carolina, 2; Tennessee, 4; Wyoming, 2; Oregon, 1.

[2] New York City only.

[3] Week ended earlier than Saturday.

[4] Typhus fever, week ended Aug. 14, 1937, 69 cases, as follows: North Carolina, 2; South Carolina, 2; Georgia, 27; Florida, 1; Tennessee, 2; Alabama, 24; Louisiana, 1; Texas, 10.

[5] Figures for 1936 are exclusive of Oklahoma City and Tulsa.

[6] Colorado tick fever, week ended Aug. 14, 1937, Wyoming, 1 case.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week:

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
April 1937										
Wisconsin	4	12	205	------	106	------	------	1,249	26	7
May 1937										
Virginia	38	38	395	25	2,559	27	3	62	0	31
June 1937										
Arkansas	2	9	27	368	20	119	14	37	0	45
Wisconsin	4	22	77	------	255	------	3	713	13	6
July 1937										
California	18	86	36	18	229	15	90	282	22	63
Colorado	4	14	2	------	146	------	7	35	4	7
Connecticut	------	27	2	------	157	------	4	68	0	9
New Jersey	5	22	5	3	928	------	7	109	0	16
North Carolina	11	43	------	52	379	91	30	63	1	106
Pennsylvania	24	75	------	------	2,739	4	8	709	0	88
West Virginia	13	21	46	3	168	------	19	79	4	54

Summary of Monthly Reports from States—Continued

April 1937

	Cases
Wisconsin:	
Chicken pox	2,279
German measles	71
Mumps	796
Ophthalmia neonatorum	1
Septic sore throat	42
Tracoma	4
Tularaemia	1
Undulant fever	5
Whooping cough	660

May 1937

Virginia:	
Chicken pox	284
Dysentery and diarrhea	117
Encephalitis, epidemic or lethargic	1
Mumps	566
Paratyphoid fever	2
Rocky Mountain spotted fever	5
Septic sore throat	10
Undulant fever	4
Whooping cough	589

June 1937

Chicken pox:	
Arkansas	21
Wisconsin	2,283
Dengue: Arkansas	2
Encephalitis, epidemic or lethargic: Arkansas	2
German measles: Wisconsin	99
Mumps:	
Arkansas	12
Wisconsin	471
Septic sore throat: Wisconsin	23
Tularaemia: Wisconsin	1
Undulant fever:	
Arkansas	4
Wisconsin	4
Whooping cough:	
Arkansas	107
Wisconsin	709

July 1937

Actinomycosis: California	2
Chicken pox:	
California	567

July 1937—Continued

	Cases
Chicken pox—Continued.	
Colorado	20
Connecticut	164
New Jersey	254
North Carolina	68
Pennsylvania	810
West Virginia	37
Dysentery:	
California (amoebic)	8
California (bacillary)	61
Colorado (amoebic)	1
Connecticut (amoebic)	1
Connecticut (bacillary)	5
New Jersey (bacillary)	2
North Carolina (bacillary)	1
West Virginia	3
Encephalitis, epidemic or lethargic:	
California	7
Connecticut	1
New Jersey	3
Pennsylvania	4
Food poisoning: California	121
German measles:	
California	34
Connecticut	10
New Jersey	68
North Carolina	20
Pennsylvania	430
Granuloma, coccidioidal: California	2
Jaundice (epidemic): California	2
Leprosy:	
California	1
West Virginia	1
Mumps:	
California	567
Colorado	20
Connecticut	109
New Jersey	179
Pennsylvania	929
West Virginia	9
Ophthalmia neonatorum:	
Connecticut	3
New Jersey	5
North Carolina	2
Pennsylvania	4
Paratyphoid fever:	
California	6
Connecticut	3
North Carolina	4

July 1937—Continued

	Cases
Rabies in animals:	
California	157
Connecticut	5
New Jersey	5
West Virginia	11
Relapsing fever: California	4
Rocky Mountain spotted fever:	
Colorado	2
New Jersey	1
North Carolina	11
Pennsylvania	1
Septic sore throat:	
California	3
Connecticut	14
North Carolina	3
West Virginia	1
Tetanus:	
California	6
Connecticut	1
New Jersey	1
Trachoma:	
California	23
Connecticut	1
New Jersey	2
Trichinosis: California	1
Tularaemia: California	4
Typhus fever:	
California	1
Colorado	7
North Carolina	10
Undulant fever:	
California	24
Colorado	1
Connecticut	6
New Jersey	5
North Carolina	5
Pennsylvania	4
Vincent's infection: Colorado	1
Whooping cough:	
California	1,401
Colorado	130
Connecticut	87
New Jersey	363
North Carolina	1,165
Pennsylvania	1,579
West Virginia	399
Yaws: California	1

PLAGUE INFECTION IN FLEAS IN CALIFORNIA, NEVADA, AND UTAH

CALIFORNIA

Dr. W. M. Dickie, Director of Public Health of California, under date of August 9, 1937, states that plague infection has been demonstrated in seven pools of fleas, taken from rodents in San Bernardino County, Calif., as follows:

44 fleas collected on July 14, 1937, from 11 *beecheyi* squirrels.
6 fleas collected on July 13, 1937, from 7 *fisheri* squirrels.
12 fleas collected on July 13, 1937, from 76 white-footed mice.
5 fleas collected on July 13, 1937, from 6 wood rats.
78 fleas collected on July 13, 1937, from 102 chipmunks.
194 fleas collected on July 12, 1937, from 74 golden-mantled squirrels.
52 fleas collected on July 16, 1937, from 13 *beecheyi* squirrels.

The report also stated that five pools of fleas, fleas and ticks, and fleas, ticks, and lice, collected from *beecheyi* squirrels in San Mateo

County in September 1936, and stored in an icebox until July 1937, had been proved positive for plague.

NEVADA

Senior Surgeon C. R. Eskey, in charge of plague suppressive measures, San Francisco, Calif., under date of August 9, 1937, reports plague-infected fleas found in Nevada as follows:

Ormsby County:

95 fleas collected on July 28, 1937, from 46 chipmunks (*Eutamias frater*).

Douglas County:

108 fleas collected on July 29, 1937, from 55 chipmunks (*Eutamias frater*).

318 fleas collected on July 31, 1937, from 200 chipmunks (*Eutamias frater*).

UTAH

Under date of August 10, 1937, Surgeon Eskey reported the demonstration of plague infection, by animal inoculation and cultures, in 25 fleas collected from 2 ground squirrels (*Citellus grammurus*) one-half mile east of Morgan, Morgan County, Utah.

SMALLPOX ON VESSEL AT NEW YORK, N. Y.

A case of smallpox in an American citizen occurred on board the British S. S. *Northern Prince*, which arrived at New York, N. Y., on August 19, 1937. The vessel left Rio de Janeiro on August 5, and the disease developed en route. The patient had been traveling in Brazil and had spent several weeks in Sao Paulo. Appropriate preventive measures were taken.

WEEKLY REPORTS FROM CITIES

City reports for week ended Aug. 7, 1937

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average	115	41	12	498	290	303	5	372	104	1,277	----
Current week	75	12	7	380	310	267	2	374	63	1,278	----
Maine:											
Portland	0	----	0	0	0	0	0	0	0	1	18
New Hampshire:											
Concord	0	----	0	0	1	0	0	0	0	0	13
Manchester	0	----	0	0	0	0	0	1	0	0	12
Nashua	0	----	----	0	----	0	0	----	0	0	2
Vermont:											
Barre	0	----	0	0	0	0	0	0	0	0	1
Burlington	0	----	0	0	0	0	0	0	0	0	9
Rutland	0	----	0	0	0	0	0	0	0	4	6
Massachusetts:											
Boston	1	----	0	6	12	7	0	5	0	32	170
Fall River	0	----	0	1	0	1	0	2	0	11	33
Springfield	0	----	0	1	0	1	0	1	0	11	35
Worcester	0	----	0	0	3	1	0	2	1	3	53
Rhode Island:											
Providence	0	3	0	1	0	2	0	3	0	24	49
Connecticut:											
Bridgeport	0	----	0	0	0	4	0	2	1	0	31

City reports for week ended Aug. 7, 1937—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths all causes
		Cases	Deaths								
Connecticut—Con.											
Hartford	1		0	2	1	3	0	2	0	8	35
New Haven	0		0	0	1	0	0	1	0	1	42
New York:											
Buffalo	0		0	0	4	2	0	5	0	0	121
New York	19	3	1	61	63	20	0	77	9	153	1,205
Rochester	0		0	1	0	0	0	1	0	6	52
Syracuse	0		0	1	0	1	0	0	0	23	35
New Jersey:											
Camden	0		0	0	3	0	0	0	3	1	22
Newark	0		0	1	3	3	0	9	0	24	92
Trenton	0		0	12	1	0	0	3	0	0	28
Pennsylvania:											
Philadelphia	2	1	1	6	14	15	0	24	5	44	350
Pittsburgh	1		0	32	17	7	0	13	0	35	169
Reading	0		0	3	1	1	0	1	0	0	21
Scranton	1			0		0	0		0	2	
Ohio:											
Cincinnati	3		1	14	3	4	0	7	0	47	169
Cleveland	4		0	38	9	13	0	9	2	56	156
Columbus	0		0	11	2	2	0	4	2	11	76
Toledo	1		0	8	1	0	0	2	1	33	81
Indiana:											
Anderson	0		0	5	3	1	0	0	0	3	16
Fort Wayne	0		0	1	1	0	0	1	0	0	25
Indianapolis	0		0	4	0	1	0	4	0	15	84
Muncie	1		0	2	0	0	0	0	1	0	9
South Bend	0		0	0	1	0	0	0	0	0	16
Terre Haute	1		0	0	0	0	0	0	0	0	17
Illinois:											
Chicago	6		1	57	18	44	0	47	3	78	634
Elgin	0		0	2	0	0	0	0	0	2	4
Moline	0		0	0	0	1	0	0	0	2	12
Springfield	0		0	2	1	0	0	0	0	11	15
Michigan:											
Detroit	6		0	33	5	43	0	14	2	64	221
Flint	0		0	1	2	4	0	1	1	6	29
Grand Rapids	0		0	4	1	2	0	0	0	24	34
Wisconsin:											
Kenosha	0		0	0	0	2	0	0	0	0	7
Milwaukee	0		0	17	2	5	0	4	1	56	
Racine	0		0	0	0	1	0	1	0	0	8
Superior	0		0	0	0	1	0	0	0	0	6
Minnesota:											
Duluth	0		0	0	0	4	0	1	0	6	16
Minnespolis	0		0	2	5	4	0	1	2	17	93
St. Paul	0		0	0	4	1	0	0	0	33	36
Iowa:											
Davenport	0			0		0	0		0	0	
Des Moines	0		0	0	2	7	0	1	1	0	28
Sioux City	0			0		1	0		0	0	
Missouri:											
Kansas City	0		0	2	3	5	0	6	1	2	98
St. Joseph	0		0	0	1	0	0	0	0	2	18
St. Louis	3		0	10	7	18	0	9	4	15	189
North Dakota:											
Fargo	0		0	0	0	0	0	0	0	12	5
Grand Forks	0			0		0	0		0	5	
Minot	0		0	0	0	1	1	0	0	0	2
South Dakota:											
Aberdeen	0			0		0	0		0	0	
Sioux Falls	0			0		0	0		0	0	
Nebraska:											
Omaha	0		0	0	1	2	1	2	1	1	62
Kansas:											
Lawrence	0		0	2	0	1	0	0	0	5	4
Topeka	0		0	0	2	0	0	0	1	7	13
Wichita	0		0	1	6	0	0	0	0	9	26
Delaware:											
Wilmington	0		0	0	3	0	0	1	1	5	26
Maryland:											
Baltimore	2	0	0	5	10	3	0	17	1	105	199
Cumberland	0		0	0	0	0	0	0	0	1	11
Frederick	0		0	0	0	0	0	1	0	0	5
Dist. of Col.:											
Washington	3		0	3	9	1	0	10	2	15	149

City reports for week ended Aug. 7, 1937—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Virginia:											
Lynchburg	0		0	0	0	1	0	2	0	2	8
Norfolk	4		0	3	2	0	0	1	0	4	29
Richmond	0		0	6	5	1	0	2	0	0	48
Roanoke	0		0	0	0	0	0	1	3	3	9
West Virginia:											
Charleston	0		0	0	0	0	0	0	0	0	11
Huntington	0			0		0	0		0	0	
Wheeling	0		0	2	2	3	0	1	0	11	20
North Carolina:											
Gastonia	0			0		0	0		0	0	
Raleigh	0		0	0	2	0	0	0	0	2	14
Wilmington	0		0	0	1	0	0	0	0	12	8
Winston-Salem	0		0	0	2	1	0	0	0	16	13
South Carolina:											
Charleston	1	2	0	0	2	3	0	1	0	0	23
Florence	0		0	0	0	0	0	1	0	0	13
Greenville	0		0	0	1	0	0	0	0	0	
Georgia:											
Atlanta	4		0	0	6	1	0	3	1	35	73
Brunswick	0		0	0	0	0	0	0	0	0	3
Savannah	0		0	0	1	0	0	0	0	0	23
Florida:											
Miami	0		0	0	1	1	0	2	1	0	30
Tampa	0	1	0	2	0	0	0	1	0	2	24
Kentucky:											
Ashland	0		0	1	1	0	0	0	7	0	15
Covington	0		0	1	1	0	0	0	0	13	15
Louisville	0		0	5	2	9	0	3	2	58	83
Tennessee:											
Knoxville	2		0	1	2	0	0	1	1	2	26
Memphis	0		0	4	2	0	0	1	1	9	75
Nashville	0		1	0	1	0	0	0	0	7	50
Alabama:											
Birmingham	1		0	1	4	0	0	5	1	3	61
Mobile	1		0	0	2	0	0	1	0	0	35
Montgomery	2	1		0		0	0		0	0	
Arkansas:											
Fort Smith	0			0		1	0		0	2	
Little Rock	0		0	0	4	0	0	1	0	0	7
Louisiana:											
Lake Charles	0		0	0	0	0	0	0	0	0	4
New Orleans	3		0	1	9	2	0	9	6	13	146
Shreveport	1		0	0	4	0	0	1	0	0	39
Oklahoma:											
Muskogee	0		0	0	0	0	0	0	2	0	1
Oklahoma City	0		0	0	1	1	0	0	2	0	35
Tulsa	1	1		0		0	0		1	20	
Texas:											
Dallas	0		0	2	1	2	0	3	2	22	75
Fort Worth	0		2	0	2	1	0	0	3	5	44
Galveston	0		0	0	1	0	0	3	0	0	19
Houston	0		0	4	2	0	0	1	2	6	63
San Antonio	0		0	0	9	0	0	10	1	1	75
Montana:											
Billings	0		0	0	1	0	0	0	0	0	11
Great Falls	0		0	0	0	1	0	0	0	6	2
Helena	0		0	0	0	0	0	0	0	0	3
Missoula	0		0	0	0	1	0	0	0	0	7
Idaho:											
Boise	0		0	0	0	0	0	0	1	0	10
Colorado:											
Colorado Springs	0		0	0	1	2	0	3	0	2	10
Denver	3		0	11	3	7	0	2	0	10	63
Pueblo	0		0	5	3	0	0	2	0	0	14
New Mexico:											
Albuquerque	0		0	2	2	0	0	1	0	0	20
Utah:											
Salt Lake City	0		0	3	2	2	0	0	0	5	21
Washington:											
Seattle	1		1	2	1	1	0	8	0	19	83
Spokane	0		0	2	2	0	0	1	0	9	37
Tacoma	0		0	0	1	0	0	1	0	5	29

City reports for week ended Aug. 7, 1937—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Oregon:											
Portland	0	----	0	2	3	7	2	5	2	1	71
Salem	0	----	----	0	----	0	0	----	0	3	----
California:											
Los Angeles	7	2	1	2	9	8	1	15	1	60	277
Sacramento	0	----	0	0	2	1	0	1	0	10	23
San Francisco	1	----	0	0	6	4	0	7	1	35	138

State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths	
Maine:			
Portland	0	0	1
Massachusetts:			
Boston	2	1	7
Worcester	0	0	1
New York:			
Buffalo	0	1	0
New York	5	1	6
Pennsylvania:			
Philadelphia	0	0	4
Pittsburgh	0	0	2
Ohio:			
Cincinnati	0	0	11
Cleveland	0	0	5
Columbus	0	0	2
Indiana:			
Indianapolis	1	0	0
Muncie	0	0	4
Illinois:			
Chicago	3	0	13
Michigan:			
Detroit	0	0	15
Wisconsin:			
Milwaukee	0	0	5
Minneapolis	0	0	4
Iowa:			
Des Moines	0	0	2
Sioux City	0	0	2
Missouri:			
Kansas City	0	0	7
St. Louis	0	0	4
Nebraska:			
Omaha	0	0	7
Kansas:			
Wichita	0	0	1
Maryland:			
Baltimore	0	0	2
District of Columbia:			
Washington	2	0	0
North Carolina:			
Winston-Salem	0	1	0
Georgia:			
Atlanta	1	0	0
Kentucky:			
Louisville	0	0	2
Tennessee:			
Memphis	0	0	1
Arkansas:			
Little Rock	0	0	2
Louisiana:			
New Orleans	1	0	1
Shreveport	0	0	3
Oklahoma:			
Oklahoma City	0	0	2
Texas:			
Dallas	1	0	6
Fort Worth	0	0	2
Houston	0	0	1
San Antonio	1	0	0
Montana:			
Missoula	0	0	1
Colorado:			
Colorado Springs	0	0	1
Denver	0	0	2
Oregon:			
Portland	0	0	1
California:			
Los Angeles	0	0	8

Encephalitis, epidemic or lethargic.—Cases: Philadelphia, 1; Cleveland, 1; Omaha, 1.
Pellagra.—Cases: Philadelphia, 1; Chicago, 1; Winston-Salem, 1; Nashville, 1; Montgomery, 1; New Orleans, 1; Dallas, 1.
Rabies in man.—Deaths: New Orleans, 1.
Typhus fever—Cases: Savannah, 1; Miami, 2; Fort Worth, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended July 31, 1937.—During the 2 weeks ended July 31, 1937, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis					1					1
Chicken pox		1		54	92	13	60	22	20	262
Diphtheria		2	1	43	18	3	1	1		69
Dysentery					1					1
Erysipelas					2				3	5
Influenza		4	1	2	16					23
Measles		19	7	178	518	71	50	93	29	965
Mumps		11			88	3	1	4	21	128
Paratyphoid fever					6					6
Pneumonia		1			7		1		3	12
Poliomyelitis		4	1	3	28	5	4	1		46
Scarlet fever		5	3	69	114	15	24	42	16	288
Smallpox								1		1
Trachoma						1			5	6
Tuberculosis	10	24	31	102	94	16	78	2	31	388
Typhoid fever			5	9	8		4	5	2	33
Undulant fever						2			1	3
Whooping cough		10	3	337	186	112	28	2	28	706

CZECHOSLOVAKIA

Communicable diseases—May 1937.—During the month of May 1937, certain communicable diseases were reported in Czechoslovakia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	5		Paratyphoid fever	16	
Cerebrospinal meningitis	15	4	Poliomyelitis	10	3
Chicken pox	284		Puerperal septicemia	26	9
Diphtheria	1,651	80	Scarlet fever	1,785	21
Dysentery	6		Trachoma	75	
Influenza	35	2	Tularaemia	7	
Lethargic encephalitis	4	3	Typhoid fever	307	24
Malaria	634		Typhus fever	3	1

ITALY

Communicable diseases—4 weeks ended May 23, 1937.—During the 4 weeks ended May 23, 1937, cases of certain communicable diseases were reported in Italy as follows:

Disease	Apr. 26–May 2		May 3–9		May 10–16		May 17–23	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	1	1	15	14	8	8	14	13
Cerebrospinal meningitis	26	25	22	21	29	23	28	21
Chicken pox	485	182	448	161	480	171	544	184
Diphtheria	470	228	397	207	403	217	403	201
Dysentery	11	8	5	5	7	5	13	9
Hookworm disease	14	8	12	6	11	7	13	7
Lethargic encephalitis	2	2	3	3	1	1	2	2
Measles	1,853	334	1,637	343	1,613	355	1,603	356
Mumps	487	128	361	113	324	102	352	115
Paratyphoid fever	41	37	46	32	39	31	43	37
Poliomyelitis	28	26	34	23	41	33	32	25
Puerperal fever	30	30	24	22	30	28	40	39
Scarlet fever	381	131	414	137	392	126	417	151
Typhoid fever	219	151	205	143	240	156	213	141
Undulant fever	127	93	124	86	134	91	130	84
Whooping cough	676	176	525	177	625	171	735	170

TURKEY

Istanbul—Typhoid fever.—According to information dated July 29, 1937, an epidemic of typhoid fever has appeared in Istanbul, Turkey. During the period June 1–15, 1937, 120 new cases of typhoid fever, with 2 deaths, were officially reported. According to unofficial reports, 371 cases of typhoid fever occurred in Istanbul during June 1937, and for the period June 1 to July 22, 1937, 797 cases were reported.

YUGOSLAVIA

Communicable diseases—4 weeks ended July 18, 1937.—During the 4 weeks ended July 18, 1937, certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	45	2	Paratyphoid fever	39	----
Cerebrospinal meningitis	22	5	Poliomyelitis	5	----
Diphtheria and croup	399	30	Scarlet fever	229	----
Dysentery	197	12	Sepsis	4	1
Erysipelas	173	4	Tetanus	56	16
Leprosy	----	1	Typhoid fever	384	29
Lethargic encephalitis	----	1	Typhus fever	77	2
Measles	83	2			

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan-American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following table must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases; D, deaths; P, present]

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Mar. 28–Apr. 24, 1937	Week ended— May 1937					June 1937				July 1937			
						1	8	15	22	29	5	12	19	26	3	10	17	24
China:																		
Canton.[1]																		
Hoihow	C																100	
Hong Kong.[2]																		
Federated Malay States	C														2			
India	C	20,182	7,736	13,015	17,023	2,612	2,860	2,558	3,036	3,083	3,219	3,050	2,508					
	D	11,282	4,305	6,488	8,324	1,407	1,533	1,370	1,511	1,545	1,611	1,526	1,179					
Assam	C	585	197	394	1,823	706	554	503	481	310	258	104	49	24	13	21	14	9
	D	330	80	161	728	289	255	266	248	147	162	72	30	10	7	8	12	5
Bassein	C		8	37	86	46	34	12	4	1	2	3	1					1
Bombay Presidency	C	646	253	98	557	256	613	687	871	832	583	451	334	345	288	406	474	840
	D	249	142	84	237	121	282	338	346	370	209	183	146	136	122	136	180	304
Bombay	C				[3] 1	[3] 1	[3] 1										[3] 1	
Calcutta	C	88	87	106	247	94	136	136	231	135	86	31	35	21	13	17	21	
Central Provinces and Berar	C	125		4	5	5	17	23	21	17	50	97	123	48	16	22	13	26
Chittagong	C	3	2	3	13	[3] 1	16	32	43	51	21	7	6		[3] 1	3		[3] 1
Madras Presidency	C	10,652	4,516	3,186	3,270		494	494	534	516	629	419						
	D	5,712	2,514	1,559	1,855		282	263	309	249	331	213						
Madras	C	75	25	5	5					1	3	2	1				1	1
	D	41	14	1	1						1	2						1
Negapatam	C	22	4	2				1		1	3			17				
	D	13	1								2			10	1			
Northwest Frontier Province	C																	
Orissa Province	C	889	609	602	368	91	38	29	15	8		39	73	76	62	56	59	60
Punjab	C			1	2	2			1			3	6	7	6	10	4	
Rangoon	C	1	4	3	6	4	4		1	3	[3] 1	[4] 4	1	1				
Sind State	C							1										
Tuticorin	C					[3] 2					4	6						

[1] During the week ended July 31, 1937, 40 cases of cholera were reported in Canton, China.
[2] During the week ended July 31, 1937, 7 cases of cholera with 7 deaths were reported in Hong Kong, China.
[3] Imported.
[4] Includes 3 imported cases.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Mar. 28–Apr. 24, 1937	Week ended— May 1937 1	8	15	22	29	June 1937 5	12	19	26	July 1937 3	10	17	24
India (French):																		
Chandernagor Territory	C	9		3	5	1			2	5	2				1	1		
Karikal Province	C	96	16	3														
Pondichery Province	C		13	1			1											
Indochina (see also table below): Cochinchina—																		
Chaudoc	C			P														
Cholon Province	C	1			P													
Philippine Islands: **Manila**	C				1													
	D				1													
Siam:																		
Bangkok	C	150	163	226	948	178	84	33	23	20	13	9	4	2		1	1	2
Provinces	C	855	1,339	1,485	1,646	286	213	146	104	47	50	72	81	52	36	55	35	18
Straits Settlements: **Penang**	C												1					
On vessels:																		
S. S. *Kedah* at Singapore from Penang	C				1													
S. S. *Hellas* at Bangkok from Swatow	C				3													
	D				2													
S. S. *Kedah* at Belawan-Deli	C				1													
S. S. *Edenga* at Penang from Negapatam	C										15							
	D										9							
S. S. *Aronda* at Rangoon from Calcutta	C										1							
S. S. *Badahur* at Rangoon from Calcutta	C											1						
S. S. *Talamba* at Port Swettenham from Madras	C														2			
S. S. *Chungking* at Bangkok from Hoihow	C																1	
S. S. *Kiangsu* at Singapore from Hong Kong	C																	1

Place		December 1936			January 1937			February 1937			March 1937			April 1937			May, 1–10, 1937
		1–10	11–20	21–31	1–10	11–20	21–31	1–10	11–20	21–28	1–10	11–20	21–31	1–10	11–20	21–30	
Indochina (French) (see also table above):																	
Cambodia [2]	C	1									2	6			2		3
	D	1									2	6			2		1
Cochinchina [2]	C		1				1				2				1		
	D		1				1				2				1		

[2] Reports incomplete.

PLAGUE [1]

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Mar. 28–Apr. 24, 1937	Week ended— May 1937					June 1937				July 1937			
						1	8	15	22	29	5	12	19	26	3	10	17	24
Algeria: Algiers	C															[3] 1	[3] 1	
Argentina. (See table below.)																		
Bolivia. (See table below.)																		
Brazil. (See table below.)																		
British East Africa:																		
Kenya	C	20	7	4	5			1	5	1		2	3	19	18	7	10	
Tanganyika	C		84	10	29	1	3	3	3	1	3	2	1					
Uganda	C	36	32	41	24	5	4	4	8	27	6	8	12	13	8	16	6	
	D	34	32	35	22	3	5	3	7	25	5	8	12	13	8	14	6	
Ceylon:																		
Central Province—Nuwara Eliya District	C											1						
Chilaw District	C									1								
Colombo	C	3	10	6		1			1		1		1					
	D	3	9	6		1			1		1		1					
Plague-infected rats		12	17	3	2	1					1	2			1			
China:																		
Amoy	C				2													
Fukien Province [3]	D				130													
Hainan Island	C			P														
Hsiatangchi. [4]																		

[1] Including plague in the United States and its possessions.
[3] Suspected.
[3] Under date of June 1, estimated deaths from plague in Province of Fukien, China, reported to be 3,000 to 4,000.
[4] Information dated May 10, states that several hundred deaths from bubonic plague had been reported in Hsiatangchi, China.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Mar. 28–Apr. 24, 1937	Week ended—											
						May 1937					June 1937				July 1937			
						1	8	15	22	29	5	12	19	26	3	10	17	24
Dutch East Indies:																		
Java and Madura	C	583	568	443	259	50	59											
	D	577	569	443	255	50	59											
Java—Batavia	C				[1]1													
Ecuador (see also table below):																		
Babahoyo	C	3	1															
Guayaquil	C	17	26	33	17	5	3						4					
	D	11	11	24	16	2		1					1	2	1			
Plague-infected rats		10	16	33	37	4	5	10	8		6	5	2			1		
Playas	C	1																
Egypt:																		
Asyut Province	C	2	1	2	48	7	1	1			1							
Dakahliya Province	C				1													
Girga Province	C			1	1	2		1						1				
Hawaii Territory: Plague-infected rats:																		
Hawaii Island—Hamakua District:																		
Hamakua Mill Sector				1														
Honokaa Sector [6]																	1	
Kukaiau		1																
Paauhau Sector		9	6	5	4	2		2					3	4		1		
Pohakea				1														
India	C	5,118	4,931	5,980	6,094	1,039	527	467	296	173	112	65	72					
	D	2,006	2,528	2,976	3,467	659	362	309	233	127	65	55	39					
Bassein	C	3	7	5	8	2		4		1		3		3			1	
Plague-infected rats			1	2	2			2				1	1					
Bombay Presidency	C	139	120	83	68	19	5	4	2	5	10	3	7	4	3	5	14	11
	D	86	62	40	37	8	4	1	1	2	3	1	3	2	3	2	10	5
Central Provinces and Berar	C	2,022	1,614	2,213	1,103	182	71	58	39	13			7			10		
Karachi	C		7	3	5	1												
Plague-infected rats					1													
Madras Presidency	C	97	94	97	53		8	1	8	6	2	4						
	D	55	57	54	30		4		6	2	1	2						
Punjab	C			1	1	1	1											
Rangoon	C	3	1	1	3	1			1							[1]1		[1]1
Sind State	C		6	4	6	1		1										

Indochina (see also table below):																		
Bentre	C	1																
Sadec	C															1		
Madagascar. (See table below.)																		
Malta	C	6			1				4									
	D	1																
Plague-infected rats		1																
Northern Rhodesia	C	8	1															
Peru. (See table below.)																		
Senegal:																		
Dakar	C				1						1					1		
Thies	C							2			1		2	1				
Tivaouane	C					1										1		
Syria: Ras el Ain region	D										[7] 12							
Tunisia: Tunis	C								1								1	1
Plague-infected rats		1			17		5									1		
Union of South Africa (see also table below)	C	[8] 2	4	3	[8] 1													
United States:[9]																		
California:[9]																		
Placer County—Plague infected fleas.																		
San Bernardino County—Plague infected fleas.																		
San Mateo County—Plague infected fleas, lice, and ticks.																		
Idaho [9]—Bannock County—Plague infected ground squirrels														[10]				
Montana—Beaverhead County—Plague infected ground squirrel																		1
Nevada [9]—																		
Douglas County	C												1					
Ormsby County—Plague infected fleas.																		
Oregon [9]—																		
Grant County—Plague infected ground squirrel								1										
Lake County—Plague infected fleas.																		
Wallowa County—Plague infected ground squirrels										1				1				
Utah [9]—Morgan County—Plague infected fleas.																		
Washington [9]—Adams County—Plague infected fleas and lice.																		
On vessel: S. S. *Magister* at Kingston from Maranhao, Para, and Manaos	C			1														

[5] Imported.
[6] During the week ended July 31, 1937, 2 plague-infected rats were reported in Honokaa Sector, Hamakua District, island of Hawaii, Hawaii Territory.
[7] Pneumonic plague.
[8] For 2 weeks.
[9] Plague infection proved in insect hosts as follows: *California*—Placer County, June 22: San Bernardino County, July 12–16; San Mateo County, July 1937. *Idaho*—Bannock County, July 8. *Nevada*—Douglas County, July 29–31; Ormsby County, July 2–28. *Oregon*—Lake County, May 7; Wallowa County, June 25. *Utah*—Morgan County, reported Aug. 10. *Washington*—Adams County, Apr. 29, 1937.
[10] Number unspecified.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		January 1937	February 1937	March 1937	April 1937	May 1937	June 1937
Argentina:							
Cordoba Province	C			1			
Salta Province	C	2					
Bolivia:							
Chuquisaca Department	C	P	5		[11] 2		
La Paz Department	C					2	
Oruro Department	C				[11] 1		
Potosi Department	C			[11] 3	[11] 1		
Brazil:							
Ceara State	C	1					
Parahyba State	C	4	1				
Pernambuco State	C		2				
Ecuador (see also table above):							
Manabi—							
Bahia	C		4	7	2		
Manta	C		8	12	13		

Place		January 1937	February 1937	March 1937	April 1937	May 1937	June 1937
Indochina (see also table above):							
Cambodia	C			1	4	4	4
Cochinchina	C	1					
Madagascar (central region)	C	[13] 170	[13] 219		57	45	
	D	161	199		57	43	
Peru	C	23	23	28	9	12	4
Cajamarca Department	C			1			
Huancabamba Department	C				3		
Lambayeque Department	C	2	4		1	1	1
Libertad Department	C	15	12	12	4	3	2
Lima Department	C	4	5	1	1	2	1
Lima City	C		1				
Piura Department	C	2	2	14		6	
Union of South Africa (see also table above)	C	2	3	3	1		

[11] Pneumonic plague.

[13] Includes 44 cases of pneumonic plague.

[13] Includes 66 cases of pneumonic plague.

SMALLPOX

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Mar. 28–Apr. 24, 1937	Week ended— May 1937					June 1937				July 1937			
						1	8	15	22	29	5	12	19	26	3	10	17	24
Algeria:																		
Algiers Department	C	2					1					1	1					
Oran Department	C			2			3					1						
Southern Territories	C				2													
Angola. (See table below.)																		
Belgian Congo. (See table below.)																		
Bolivia. (See table below.)																		

Brazil:																		
Bahia	C	14	7	6	15	3	4											
Porto Alegre (alastrim)	D	1			3	1								1				
Recife (alastrim)	C		1	3	1													
Rio de Janeiro	C	3																
British East Africa: Tanganyika	C	382	122	55	72	65		28				57			65			
Canada:																		
Alberta	C	2	[1] 46		[1] 1						[1] 1				[1] 1		[1] 3	
British Columbia	C	[1] 1																
Manitoba	C			[1] 1														
Saskatchewan	C		[1] 1															
Ceylon: **Colombo**	C		1															
China:																		
Amoy	C	3		3	2	1							1					
Canton	C		4	3	4		1		1									
Dairen	C	2	6	4	8			2					2	3				
Foochow	C	P	P	P	P	P		P			P		P		P			
Hangchow	C	5	3	1	3				1									
Hankow	C	7	5	8	11	1	5	2	1	2	2							
Hong Kong	C	7	5	7	32	7	4	1		4	4	3			1		2	
Macao	C			2														
Nanking	C	2	7	7	3					1		1	1	2				
Shanghai	C	231	127	96	55	8	11	10	12	13	3	6	6	3	10	8	2	8
Swatow	C			3	4		1		2	2		1	1					
Tientsin	C	2	11	5	3	1	3	1	1	1	1	2		1				
Chosen. (See table below.)																		
Colombia: **Barranquilla**	D	1	3	2	1						1			1				
Dahomey. (See table below.)																		
Dutch East Indies: **Java—Surabaya**	C	[2] 1																
Ecuador: **Guayaquil**	C	10	33	73	34	4	6	9	12		20	8	14	6	4	13	9	4
Egypt:																		
Port Said	C				4									1				
Qena Province	C			1														
Eritrea	C		3	103	4					1		2		1			2	
Estonia	C				2													
Finland. (See table below.)																		
France. (See table below.)																		
Gambia:																		
Bathurst	C			[1] 4														
MacCarthy Island	C			4														
Great Britain: England and Wales—																		
Derby	C			2														
Lancaster—Failsworth	C	2																
Ripley	C			1														
Greece: **Salonika**	C	10	15	18	30	8	8	7	7	7	5					12	12	
Guatemala. (See table below.)																		
Honduras: **Puerto Castilla**	C				1													
India	C	10,849	13,761	12,592	12,022	2,216	2,427	2,009	2,143	2,111	2,629	2,695	2,168	1,755				
	D	2,740	3,219	3,005	2,557	442	585	468	580	614	755	764	636	570				
Assam	C	212	220	163	204	88	91	75	66	64	71	54	65	48	15	25	15	31
Bassein	C	18																

[1] For 2 weeks.

[2] Imported.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Mar. 28–Apr. 24, 1937	Week ended— May 1937 1	8	15	22	29	June 1937 5	12	19	26	July 1937 3	10	17	24
India—Continued.																		
Bombay Presidency	C	671	905	782	1,147	318	286	153	262	159	194	98	114	130	82	68	102	----
	D	99	146	136	198	60	30	35	64	39	39	20	24	37	35	19	35	----
Bombay	C	25	49	63	136	40	34	21	40	30	24	18	23	40	27	22	27	15
	D	17	29	48	68	28	19	14	28	16	16	13	17	26	19	16	16	7
Calcutta	C	29	86	87	57	22	37	20	18	9	6	4	8	3	2	4	5	----
	D	12	34	68	51	16	2	14	11	4	5	4	8	2	2	2	3	----
Central Provinces and Berar	C	235	299	341	505	130	136	45	84	57	35	65	73	29	17	42	35	22
Chittagong	C	237	208	55	12	1	----	----	----	----	[2]2	----	----	----	1	1	----	----
Cochin	C	----	----	----	47	1	----	----	----	2	----	----	----	----	----	----	----	----
Karachi	C	40	49	40	28	12	2	3	----	2	4	----	1	----	----	----	----	----
Madras Presidency	C	671	579	632	569	----	131	107	115	130	75	55	----	----	----	----	----	----
	D	131	84	118	89	----	24	21	30	23	18	13	----	----	----	----	----	----
Madras	C	3	37	24	24	9	11	10	12	7	8	8	11	16	19	14	14	27
Moulmein	C	48	64	48	8	----	----	----	----	----	----	[2]1	----	----	----	----	----	----
Northwest Frontier Province	C	125	85	55	49	15	5	1	----	9	16	6	19	5	32	33	74	9
Orissa Province	C	681	1,049	848	766	126	150	172	----	170	----	199	122	136	77	131	74	114
Punjab	C	533	490	552	400	127	55	138	111	82	251	95	159	169	174	140	90	64
Rangoon	C	5	14	5	9	1	----	1	----	1	----	----	----	1	----	----	----	----
Sind State	C	195	184	143	263	3	58	31	----	96	40	52	57	105	65	41	75	56
Vizagapatam	C	----	3	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----
India (French): Chandernagor Territory	C	----	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Indochina (see also table below):																		
Pnom-Penh	C	----	----	----	1	----	----	----	1	----	----	----	1	----	----	----	----	----
Saigon-Cholon	C	2	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tourane	C	3	3	4	3	----	----	----	----	----	----	----	----	----	----	----	----	----
Iran	C	11	10	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----
Teheran	C	----	2	2	----	----	1	----	----	----	----	----	----	----	----	----	----	----
Iraq	C	1	1	----	14	1	----	----	1	----	----	----	----	----	----	----	1	----
Baghdad	C	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----
Italian Somaliland	C	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----
Japan:																		
Kobe	C	----	----	[2]1	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Moji	C	----	----	1	10	1	----	1	1	----	----	[2]1	----	----	----	----	----	----
Osaka	C	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----
Yokohama	C	----	1	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----

Mexico (see also table below):																		
Chihuahua	C		3													1		
Ciudad Juarez	D																1	
Durango	D	2	1	10	8	2	2			1		2		2				
Guadalajara	D				1		1			1	1							
Mazatlan	C												1		1			
Mexico, D. F	C	7	4	4	10	3	6	13	13	1								
Monterrey	C	2	11	1	3					1							1	
San Luis Potosi	D							1										
Torreon	C	31	7	1	11		3	6	12	1	2	4		6	3	4		
Morocco. (See table below.)																		
Nicaragua: Puerto Cabezas	C		2															
Nigeria	C	300	19	406	188		281					69		42				
Lagos	C		1		1													
Nyasaland. (See table below.)																		
Palestine. (See table below.)																		
Poland	C		1															
Portugal (see also table below):																		
Lisbon	C	2	1	2	1			1			3	1		2	5			1
Oporto	C	1	1											1	1			
Salvador. (See table below.)																		
Siam: Tak Province	C		26	1	7							2	1		1			2
Sierra Leone	C	88	12				2				1							
Freetown	C		1															
Southern Rhodesia	C				1													
Sudan (Anglo-Egyptian)	C	37	75	12	2	7	3		1	2		33	1	5	6			2
Tunisia	C	1	105											4				
Turkey. (See table below.)																		
Uruguay	C		1									2	1					

[1] Imported.

On vessels:

S. S. *Jaldurga* at Rangoon from Gopalpur	1 case	Dec. 30, 1936
S. S. *Egra* at Rangoon from Calcutta	1 case	Jan. 4, 1937
S. S. *Tango Maru* at Singapore from Japan	1 death	Jan. 16, 1937
S. S. *Juna* at Rangoon from Penang	1 case	Jan. 27, 1937
S. S. *Horai Maru* at Moji from Keelung	2 cases	Jan. 28, 1937
S. S. *Tjibadak* at Surabaya from Shanghai	1 case	Jan. 28, 1937
S. S. *Colorado Springs* at Manila from Shanghai	1 case	Feb. 1, 1937
S. S. *Nikko Maru* at Moji from Tsingtao	1 case	Feb. 7, 1937
S. S. *Bhadravati* at Bombay from Vengurla	1 case	Feb. 18, 1937
S. S. *Nagasaki Maru* at Nagasaki from Shanghai	1 case	Mar. 8, 1937
S. S. *Kiangsu* at Swatow from Bangkok	1 case	Mar. 13, 1937

On vessels—Continued.

S. S. *Sumatra* at Calcutta	2 cases	Mar. 21, 1937
S. S. *Englestan* at Rangoon from Chittagong	1 case	Mar. 25, 1937
S. S. *Dariken* at Hong Kong	1 case	Mar. 31, 1937
S. S. *Talma* at Hong Kong	1 case	Apr. 1, 1937
S. S. *Jalagopal* at Rangoon from Chittagong	1 case	Apr. 2, 1937
S. S. *Taksang* at Hong Kong	1 case	Apr. 13, 1937
S. S. *President Hoover* at Yokohama from Honolulu	1 case	Apr. 17, 1937
S. S. *Hydri* at Karachi	1 case	Apr. 24, 1937
S. S. *G. G. Pasquier* at Singapore from Saigon	1 case	May 7, 1937
S. S. *Changte* at Thursday Island	1 case	June 26, 1937
S. S. *Northern Prince* at New York from Rio de Janeiro	1 case	Aug. 19, 1937

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		January 1937	February 1937	March 1937	April 1937	May 1937	June 1937
Belgian Congo	C	111	158	283	143	287	----
Bolivia	C	28	4	5	25	48	----
China: Manchuria—Harbin	C	----	----	3	11	4	----
Chosen	C	1	41	58	73	27	----
Dahomey	C	----	----	5	2	----	----
Finland	C	1	1	----	----	----	----
France	C	----	----	1	1	1	----
Guatemala	C	5	2	----	----	----	2
Indochina (see also table above)	C	306	382	505	316	274	273
	D	84	70	97	46	95	50
Mexico (see also table above):							
Aguascalientes State—Aguascalientes	C	1	1	----	1	----	----
Chihuahua State	C	----	----	----	1	----	----
Colima State	C	----	2	----	4	----	----
Jalisco State—Guadalajara	C	1	1	----	1	----	----
Mexico State	C	----	----	1	----	----	----
Mexico, D. F	C	12	----	16	13	----	----
Mexico City	D	5	2	----	----	----	----
Mexico—Continued.							
Morelos State	C	4	----	----	----	----	----
Nayarit State	C	1	----	----	----	----	----
Nuevo Leon State—Monterrey	C	----	6	----	----	----	----
Puebla State—Puebla	C	1	----	----	----	----	----
Queretaro State	C	----	----	3	1	----	----
San Luis Potosi State—San Luis Potosi	C	1	1	----	1	----	----
Morocco	C	6	6	----	6	1	1
Nyasaland	C	----	7	----	3	----	----
Palestine	C	2	8	----	----	----	----
Portugal (see also table above)	C	113	59	27	15	29	----
	D	3	6	2	5	1	----
Salvador	C	----	----	----	4	----	----
Turkey	C	----	----	----	15	4	1

TYPHUS FEVER

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Week ended— April 1937				May 1937					June 1937				July 1937		
					3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17
Algeria:																				
Algiers Department	C	71	128	84	16	19	35	26	17	14	30	9	8	2	27	47	3	15	8	34
Algiers	C	1	2	3	2	----	2	----	1	----	1	2	----	----	1	1	----	1	5	5
Constantine Department	C	159	139	225	64	128	70	86	98	47	92	71	109	115	----	68	33	65	46	23
Bone	C	2	10	3	----	----	2	2	1	----	----	4	1	11	----	----	----	----	----	3
Philippeville	C	6	----	1	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----

Oran Department	C	16	64	72	------	2	2	20	1	3	------	------	6	8	9	9	------	4	------	6
Southern Territories	C	5	9	[1]2	------	------	1	------	------	------	------	------	2	1	5	3	------	3	1	------
Arabia: **Aden**	C	------	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Australia: **Sydney**	C	------	------	1	------	------	------	------	------	------	------	1	------	------	------	------	------	------	------	------
Bolivia. (See table below.)																				
Bulgaria. (See table below.)																				
Chile	C	401	226	175	39	53	42	20	41	------	------	------	[2]212	------	------	------	------	------	------	------
Concepcion Province	C	------	18	20	6	2	5	1	------	------	------	------	------	------	------	------	------	------	------	------
Iquique	C	------	------	------	------	------	------	------	------	------	------	1	------	------	2	------	------	------	------	------
Santiago Province	C	------	130	69	14	19	16	9	27	------	------	------	[2]51	------	------	------	------	------	------	------
Valparaiso	C	10	10	37	9	14	9	7	2	17	13	28	11	30	22	29	24	17	6	13
China (see also table below):																				
Dairen	C	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Hankow	C	2	------	------	------	------	------	------	------	------	------	------	------	------	1	------	------	------	------	------
Nanking	C	------	------	------	------	------	------	------	------	3	1	------	------	------	------	------	------	------	------	------
Shanghai	C	------	------	1	------	------	------	------	------	1	2	------	1	1	2	1	------	5	------	------
Swatow	C	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	1	------	------
Tientsin	C	1	1	1	------	------	1	------	------	1	1	------	------	1	1	1	3	------	------	------
Tsingtao	C	------	2	------	------	------	------	1	7	4	1	------	------	------	------	------	------	------	------	------
Chosen. (See table below.)																				
Czechoslovakia. (See table below.)																				
Egypt:																				
Alexandria	C	10	9	5	1	------	1	3	4	4	5	3	4	4	1	------	------	------	1	1
Aswan Province	C	------	------	7	------	------	3	2	4	------	------	------	2	------	------	------	------	------	------	------
Asyut Province	C	------	2	5	------	------	------	------	------	------	------	------	------	5	------	------	------	1	1	2
Beheira Province	C	8	60	18	------	------	20	33	24	------	27	------	23	14	------	------	------	10	7	5
Beni-Suef Province	C	------	------	------	------	------	------	------	------	------	------	------	1	------	------	------	------	------	------	------
Cairo	C	------	4	11	3	1	6	4	4	4	6	2	1	1	------	------	------	------	------	------
Dakahilya Province	C	------	25	15	------	------	12	26	24	------	35	------	15	15	------	------	------	14	10	6
Damietta Province	C	------	------	------	------	------	------	------	------	------	------	------	------	1	1	------	------	------	------	------
Faiyum Province	C	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	1
Gharbiya Province	C	5	20	12	------	------	19	40	40	------	56	------	39	55	------	------	------	17	19	1
Girga Province	C	------	------	------	------	------	------	------	------	------	------	------	1	2	------	------	------	1	1	------
Minufiya Province	C	1	20	6	------	------	1	10	6	------	10	------	9	4	------	------	------	------	1	------
Minya Province	C	1	21	------	------	------	------	------	------	------	1	------	1	------	------	------	------	------	------	------
Port Said	C	8	1	------	------	------	------	------	------	------	------	------	------	------	------	1	------	1	1	------
Qena Province	C	1	------	------	------	------	4	10	26	------	6	------	1	3	------	------	------	------	------	------
Sharkiya Province	C	1	------	1	------	------	------	2	10	------	------	------	1	3	------	------	------	------	1	------
Suez	C	------	------	------	------	------	------	------	------	------	------	------	------	------	------	1	------	------	------	------
Provinces	C	114	175	123	24	36	60	123	144	170	150	149	96	106	59	85	57	45	40	17
Eritrea: Asmara	C	14	1	------	------	2	2	2	3	------	------	1	------	1	1	------	------	------	------	------
Finland. (See table below.)																				
Greece (see also table below): **Salonika**	C	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Guatemala. (See table below.)																				
Hawaii Territory: **Honolulu**	C	5	------	1	1	------	------	------	------	------	------	------	------	------	------	------	------	1	------	1
Hungary	C	------	7	12	------	------	------	------	------	------	------	1	------	------	------	------	------	1	------	------
Iran	C	7	19	[1]1	------	6	1	------	------	4	------	7	3	15	1	------	9	------	------	------
Teheran	C	2	3	------	------	------	------	------	------	1	------	------	------	1	------	------	------	------	------	------

[1] Imported.
[2] For 4 weeks.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

TYPHUS FEVER—Continued

[C indicates cases; D, deaths; P, present]

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Week ended— April 1937				May 1937					June 1937				July 1937		
					3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17
Iraq:																				
Baghdad	C	1			[1] 5												1	1		1
Diwaniyeh Province	C									6										
Kirkuk Province	C			12				8		2			1	2	4	6		2		
Kut Province	C					1														
Irish Free State: Kerry County—Caherciveen	C		4		4															
Latvia. (See table below.)																				
Libya. (See table below.)																				
Lithuania. (See table below.)																				
Mexico (see also table below):																				
Mexico, D. F.	C	12	20	11	4	4	2	3	4	7	2	3	2							
San Luis Potosi	D	2													1					
Torreon	C					1														
Morocco (see also table below)	C	5	22	24	30	28	23	39	69	65	70	47	101	49	50	38	37	31	15	13
Casablanca	C													200				2		
Palestine:																				
Haifa	C	3	1	1		1			1	1		2	2		1				2	
Jaffa	C	2		2	2	1		1	1		2	1	2		2	1		1		2
Panama Canal Zone. (See table below.)																				
Poland	C	399	485	462	161	169	136	163	158	132	205	199	111	106	76	66	39	30	18	18
	D	22	26	33	9	12	7	12	9	11	10	5	8	5	9	4	2			1
Rumania. (See table below.)																				
Sierra Leone: Freetown	C	1	1							2										
Straits Settlements: Singapore	C	1														1				
Syria	C					1														
Trans-Jordan	C		3	1		1	2		3				2						1	
Tunisia:																				
Tunis	C	7	5	4		1	3		2	3	9	1	5	3	9	2	5	1	1	1
Provinces	C	214	247	550	79	102	133	114	90	166	133	136	141	93	188	139	126	87	97	105
Turkey. (See table below.)																				
Union of South Africa. (See table below.)																				
Yugoslavia. (See table below.)																				
On vessel: At Santos	C			P																

[1] Imported.

Place		January 1937	February 1937	March 1937	April 1937	May 1937	June 1937
Bolivia	C	24	25	30	48	39	----
Bulgaria	C	19	----	----	----	----	----
China: Manchuria—Harbin	C	8	35	58	45	29	----
Chosen	C	88	149	154	147	99	----
Czechoslovakia	C	15	12	33	25	3	----
Finland	C	----	----	----	1	----	1
Greece (see also table above)	C	7	2	4	2	1	----
Guatemala	C	29	19	4	13	12	8
Latvia	C	----	----	1	1	----	----
Libya	C	----	----	----	----	13	34
Lithuania	C	13	10	23	37	6	----
Mexico (see also table above):							
Aguascalientes State: Aguascalientes	C	2	3	1	1	----	----
Guanajuato State	C	----	----	2	----	----	----
Hidalgo State	C	----	----	----	5	----	----
Jalisco State—Guadalajara	D	----	----	1	----	----	----
Mexico State	C	8	----	1	----	----	----
	D	1	----	1	----	----	----
Mexico—Continued							
Mexico, D. F	C	14	18	12	16	----	----
Mexico City	D	6	6	----	----	----	----
Oaxaca State	C	----	2	----	----	----	----
Puebla State: Puebla	C	7	3	----	----	----	----
Queretaro State	C	1	2	1	1	----	----
San Luis Potosi State: San Luis Potosi	C	7	----	2	2	----	----
Morocco (see also table above)	C	11	22	27	190	233	182
Panama Canal Zone	C	----	----	----	----	2	----
Rumania	C	941	1,018	917	832	557	----
Turkey	C	24	50	68	39	155	72
Istanbul	C	7	3	----	3	----	----
Union of South Africa:							
Cape Province	C	52	12	38	41	35	----
Natal	C	4	1	1	----	7	----
Orange Free State	C	5	11	5	3	27	----
Transvaal	C	13	1	2	----	1	----
Yugoslavia	C	159	125	----	----	----	----

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

YELLOW FEVER

[C indicates cases; D, deaths; P, present]

Place		Dec. 27, 1936–Jan. 30, 1937	Jan. 31–Feb. 27, 1937	Feb. 28–Mar. 27, 1937	Week ended—																
					April 1937				May 1937					June 1937				July 1937			
					3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24
Brazil:[1]																					
Acre Territory	D	1	1																		
Matto Grosso State[1]	C		20	1																	
	D	3	6	3					2	1											
Minas Geraes State[1]	C	1	2																		
	D	1	13	34	3	6	2	2	1												
Para State[1]	D							1											1		
Paraná State	C		2																		
São Paulo State[1]	C	4	1																		
	D	4	14	38	4	5	6	1													
Colombia:																					
Barrancabermeja	C		1																		
Boyaca Department	C												1					1			
	D		1	1									3							2	
Cundinamarca Department	D	2												1							
Intendencia of Meta—Villavicencio	D			1			2	1													
Santander Department	C		1																		
	D	1	1			1	1			1		1									
Dahomey: Bohicon	C																[5]1				
French Equatorial Africa:																					
Brazzaville	D							1													
Libreville[3]	C			1																	
	D		1																		
Gold Coast[4]	C	6	3	1						2			2		6	3	2	5		10	2
	D												1		1			4		10	2
Accra	C	5	3													1	1	1		1	
Mugo	C												1								
Ivory Coast:																					
Adzope	C		3																		
Agboville	C			1																	
Nigeria:																					
Farcados	C																				1
Ibadan.[5]																					

Ogbomosho	C																	3	1		1
	D																	1			1
Ovim.[5]																						
Paraguay.[6]																						
Peru: Perene region (Pampa Whaley)	C				[7] 10	[7] 13																
	D				5	3																
Senegal:																						
Bambey	C																[2] 1					
Dakar	C										[2] 1											
Diakhao	C			1					1													
Linguere	C															[2] 1						
Malem Hodar	C												1									
Thies Circle—Khombole	C					1																
Tilmaka	C					1						1										
Tivaouane	C					1																
Sudan (French): Mahina	C									[2] 1												

[1] See also reports of yellow fever in Brazil on pp. 463, 536, 657, 683, 762, 818, and 912, of the PUBLIC HEALTH REPORTS.
[2] Suspected.
[3] During the week ended July 31, 1937, 1 case of yellow fever with 1 death was reported in Libreville, French Equatorial Africa.
[4] During the week ended Aug. 7, 1937, 6 cases of yellow fever with 4 deaths were reported in the interior of Gold Coast.
[5] During the week ended July 31, 1937, 1 case of yellow fever was reported in Ibadan and 1 death from suspected yellow fever at Ovim, Nigeria.
[6] A dispatch dated June 4, 1937, from the United States legation in Asuncion, Paraguay, states that yellow fever has been officially reported in the northwestern part of Paraguay.
[7] Jungle type.